



# Derivative Rules - Natural Exponential

## Simple Exponent (with Rule) to Derivative

<b>1</b> Find the derivative $f'(x)$ using the natural exponential rule and the chain rule.	$\frac{d}{dx} e^u = e^u \cdot \frac{du}{dx}$ $f(x) = 5e^x$	<b>2</b> Find the derivative $f'(x)$ using the natural exponential rule and the chain rule.	$\frac{d}{dx} e^u = e^u \cdot \frac{du}{dx}$ $f(x) = 3e^x$
<b>A</b> $f'(x) = 5e^x$	<b>B</b> $f'(x) = 5(x)e^{x-1}$	<b>A</b> $f'(x) = 3e^x \cdot (x)$	<b>B</b> $f'(x) = 3e^x$
<b>C</b> $f'(x) = 5e^x \cdot (x)$		<b>C</b> $f'(x) = 3(x)e^{x-1}$	
<b>3</b> Find the derivative $f'(x)$ using the natural exponential rule and the chain rule.	$\frac{d}{dx} e^u = e^u \cdot \frac{du}{dx}$ $f(x) = 4e^x$	<b>4</b> Find the derivative $f'(x)$ using the natural exponential rule and the chain rule.	$\frac{d}{dx} e^u = e^u \cdot \frac{du}{dx}$ $f(x) = e^x$
<b>A</b> $f'(x) = 4e^x$	<b>B</b> $f'(x) = 4(x)e^{x-1}$	<b>A</b> $f'(x) = (x)e^{x-1}$	<b>B</b> $f'(x) = e^x \cdot (x)$
<b>C</b> $f'(x) = 4e^x \cdot (x)$		<b>C</b> $f'(x) = e^x$	
<b>5</b> Find the derivative $f'(x)$ using the natural exponential rule and the chain rule.	$\frac{d}{dx} e^u = e^u \cdot \frac{du}{dx}$ $f(x) = 2e^x$		
<b>A</b> $f'(x) = 2e^x$	<b>B</b> $f'(x) = 2(x)e^{x-1}$		
<b>C</b> $f'(x) = 2e^x \cdot (x)$			